

CLAIMS

What is claimed is:

1. An isolated polypeptide molecule comprising residues 475 to 488 of SEQ ID NO:2.

2. The isolated polypeptide molecule according to claim 1, wherein the polypeptide molecule has one amino acid substitution.

3. The isolated polypeptide molecule according to claim 1, wherein the polypeptide comprises residues 420 to 495 of SEQ ID NO:2.

4. The isolated polypeptide molecule according to claim 3, wherein the polypeptide is selected from the group consisting of:

b) a polypeptide molecule comprising residues 208 to 495 of SEQ ID NO:2;

c) a polypeptide molecule comprising residues 31 to 495 of SEQ ID NO:2;

d) a polypeptide molecule comprising residues 1 to 495 of SEQ ID NO:2;

e) a polypeptide molecule comprising residues 1 to 802 of SEQ ID NO:2; and

f) a polypeptide molecule comprising residues 1 to 812 of SEQ ID NO:4.

5. An isolated polynucleotide molecule encoding the polypeptide molecule according to claim 4.

6. The isolated polypeptide molecule of claim 1, wherein at least nine contiguous amino acid residues of SEQ ID NO:2 or SEQ ID NO:4 are operably linked via a

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peptide bond or polypeptide linker to a second polypeptide selected from the group consisting of maltose binding protein, an immunoglobulin constant region, and a polyhistidine tag.

7. An isolated polypeptide molecule, wherein the polypeptide molecule is selected from the group consisting of:

- (a) a polypeptide molecule comprising residues 208 to 410 of SEQ ID NO:2;
- (b) a polypeptide molecule comprising residues 497 to 802 of SEQ ID NO:2;
- (c) a polypeptide molecule comprising residues 31 to 200 of SEQ ID NO:2;
- (d) a polypeptide molecule comprising residues 497 to 701 of SEQ ID NO:4;
- (e) a polypeptide molecule comprising residues 702 to 724 of SEQ ID NO:4;
- (f) a polypeptide molecule comprising residues 725 to 812 of SEQ ID NO:4;
- (g) a polypeptide molecule comprising residues 208 to 495 of SEQ ID NO:2;
- (h) a polypeptide molecule comprising residues 31 to 495 of SEQ ID NO:2;
- (i) a polypeptide molecule comprising residues 1 to 495 of SEQ ID NO:2;
- (j) a polypeptide molecule comprising residues 208 to 802 of SEQ ID NO:2;
- (k) a polypeptide molecule comprising residues 31 to 802 of SEQ ID NO:2;
- (l) a polypeptide molecule comprising residues 1 to 802 of SEQ ID NO:2;
- (m) a polypeptide molecule comprising residues 420 to 812 of SEQ ID NO:4;
- (n) a polypeptide molecule comprising residues 204 to 812 of SEQ ID NO:4;
- (o) a polypeptide molecule comprising residues 31 to 812 of SEQ ID NO:4;
- (p) a polypeptide molecule comprising residues 1 to 812 of SEQ ID NO:4;
- (q) a polypeptide molecule comprising residues 725 to 812 of SEQ ID NO:4;
- (r) a polypeptide molecule comprising residues 497 to 724 of SEQ ID NO:4;
- (s) a polypeptide molecule comprising residues 420 to 724 of SEQ ID NO:4;
- (t) a polypeptide molecule comprising residues 208 to 724 of SEQ ID NO:4;
- (u) a polypeptide molecule comprising residues 31 to 724 of SEQ ID NO:4;
and
- (v) a polypeptide molecule comprising residues 1 to 724 of SEQ ID NO:4.

8. An isolated polynucleotide molecule encoding the polypeptide molecule according to claim 7.

9. An expression vector comprising the following operably linked elements:

- a) a transcription promoter;
- b) a DNA segment encoding the polypeptide of claim 8; and
- c) a transcription terminator.

10. An expression vector of claim 9 wherein the DNA segment further encodes an affinity tag.

11. A cultured cell into which has been introduced an expression vector according to claim 9, wherein said cell expresses the polypeptide encoded by the DNA segment.

12. A method of producing a polypeptide comprising culturing a cell according to claim 11, whereby said cell expresses the polypeptide encoded by the DNA segment, and recovering the polypeptide.

Sub a3 > 13 The polypeptide made by the method of claim 12.

14. A method of producing an antibody to the polypeptide made by the method of claim 12 comprising the following steps:

inoculating an animal with the polypeptide such that the polypeptide elicits an immune response in the animal to produce the antibody; and
isolating the antibody from the animal.

15. An antibody produced by the method of claim 14 which binds to a polypeptide of SEQ ID NOS:2 or 4.

16. The antibody according to claim 15, wherein the antibody specifically binds to a polypeptide comprising amino acid residues 475 to 488 of SEQ ID NO:2.

17. A method for modulating cell-cell interactions comprising combining the cells with a polypeptide selected from the group consisting of:

- a) a polypeptide comprising residues 475 to 488 of SEQ ID NO:2;
- b) a polypeptide comprising residues 420 to 495 of SEQ ID NO:2;
- c) a polypeptide comprising residues 208 to 410 of SEQ ID NO:2;
- d) a polypeptide comprising residues 497 to 802 of SEQ ID NO:2;
- e) a polypeptide comprising residues 31 to 200 of SEQ ID NO:2;
- f) a polypeptide comprising residues 497 to 701 of SEQ ID NO:4;
- g) a polypeptide comprising residues 702 to 724 of SEQ ID NO:4; and
- h) a polypeptide comprising residues 725 to 812 of SEQ ID NO:4

whereby the cells come in contact with the polypeptide.

18. A method for modulating cell-cell interactions according to claim 17 whereby the cells are derived from tissues selected from the group consisting of:

- a) tissues from testes;
- b) tissues from ovary;
- c) tissues from spinal cord;
- d) tissues from prostate;
- e) tissues from small intestine; and
- f) tissues from colon.

19. An isolated polypeptide, wherein the polypeptide comprises residues 208 to 410 of SEQ ID NO:2.

20. An isolated polynucleotide, wherein the polynucleotide encodes the polypeptide according to claim 19.

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